

#5/AR  
10/15/99

OIPE

PAGE: 1

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/301,906

DATE: 05/10/1999  
TIME: 14:09:13

Input Set: I301906.RAW

This Raw Listing contains the General Information  
Section and up to first 5 pages.

ENTERED

```
1 <110> APPLICANT: Gonsalves, Dennis
2   Ling, Kai-Shu
3 <120> TITLE OF INVENTION: GRAPEVINE LEAFROLL VIRUS PROTEINS AND THEIR USES
4 <130> FILE REFERENCE: 19603/2842
5 <140> CURRENT APPLICATION NUMBER: US/09/301,906
6 <141> CURRENT FILING DATE: 1999-04-29
7 <150> EARLIER APPLICATION NUMBER: 60/083,404
8 <151> EARLIER FILING DATE: 1998-04-29
9 <160> NUMBER OF SEQ ID NOS: 15
10 <170> SOFTWARE: PatentIn Ver. 2.0
11 <210> SEQ ID NO 1
12 <211> LENGTH: 17919
13 <212> TYPE: DNA
14 <213> ORGANISM: grapevine leafroll-associated virus 3
15 <400> SEQUENCE: 1
16   ctaagtaaca ctaggaatt tctacctaag attcaacttc tttctttttc tagttttaaa 60
17   ttttcctgct gtttgaggga agtttgccct tcttcttcg tcgtccttcg taaaccatta 120
18   tttctatttc ctctcctttt aagtttttaa gtttcgctat ggactacatt cgcccattgc 180
19   gcgttttctc ctttcctcac gttaataaca ccttgaggta cgttaggtag aacaaggcca 240
20   atggtgatgt aggagctttc ctaaccacca tgaagttcat agggaaacgtg aagtgtcgg 300
21   acttcacacc cagggtgcgc gctatgattt acattggaaa gtcacacaaa ggggtgaagc 360
22   gtacgtttgt ccccccacca gttaaagggt ttgcacggca gtacgctgtt gtcagcggct 420
23   cagtcagcgc gctgagaggg gatggtaaga aggtcttgat ggaggcaagg acctcaactt 480
24   ccgcaacttc cgacgtgtct gatttcgacg tcgtattcga agctgtttct aatgcattac 540
25   ttgtcgtaca ctaccaccgg gtagtgccgt atgcccccg caagcgcgag cagcctaaac 600
26   cggctgttaa gcaagatgag cagaagccca aacggcaagc gtcacattgg gctgttaagc 660
27   caacagctgt tggcgtccac gtaccacttc ctaaaaaaca ggaagcactg gagccagcgc 720
28   aatcagctcc acaacagtcg ttggaggaga aggcgcctt gacgtttggc cttttcttca 780
29   gtaaaagggtg ggggtgatgag agcgacgctg tcatcttgcg gaaagggaaa ttgtttaaca 840
30   gggcccttaa tggtcctatt gatgtaaaga acacgttcgt ttgggctaaa atctgggatg 900
31   aagcctctcg taggagaggg tatttttacg tcaaagatag agctgttaaa ttcttcccta 960
32   ttgtgcgggg tagggctacg atcgaggact tcatcgtgaa tacagcccca ggggtgtgatg 1020
33   ttgccttgcc gcgcattgag ttgtggagta tgcgcgaaag ggcgtttgta tgcaccacca 1080
34   aaggggtggtg ttggtttaac aatgagaggc tgaggggaga aatttacaga cgtcgttgct 1140
35   tctcatcttc cttttcgata ggtttcttga tgcaccttg ctttagatcg ttaaagggtca 1200
36   ttaggtttgc gggcacgaac atactacaca tgccatcact caatgaagag cgtacctttg 1260
37   ggtggaagg gggagacgtc tatctcccca atgtcccaa aaccgctatc gtcgctggcg 1320
38   ataggacacg gttgggaggg gagatcttgg cctccgtcgc caatgccctt aatcaagagg 1380
39   aggtctattc atcggtcgtt tcgagtatca ccaatagact ggtattaagg gaccaatcgg 1440
40   cattgctttc ccatttggac acgaaattgt gcgatatgtt ttctcaaagg gacgcaatga 1500
41   ttcgcgaaaa accctcacat aggtgcgatg tgtttctgaa gccgcgggaa agggagaagc 1560
42   tgagggaact ctttccagag ctttcgatac agttctccga ctcggtcagg agtagtcacc 1620
43   cattcgctaa tgccatgcgg agctgtttca atggaatctt ttccaggagg tgtggtaagt 1680
44   tgtgcttctt cgatattggg gggagcttca cgtatcatgt caaagctggc catgtgaact 1740
```

PAGE: 2

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/301,906

DATE: 05/10/1999  
TIME: 14:09:13

Input Set: I301906.RAW

45	gtcatgtatg	caatccagtc	ctagacgtta	aagatgtgaa	gcggagaatc	aatgagatcc	1800
46	tctttctttc	cacagctggg	ggagattcgt	acgtgtccag	tgaccttcta	actgaagcgg	1860
47	cttcaaagtc	tgtgtcttac	tgtagtcgag	aatcgcagaa	ctgcgattct	agagccgatg	1920
48	cgggtttttat	ggtggatgtg	tacgatataat	ccccgcagca	ggtagcagag	gctatggata	1980
49	agaaggggtgc	gctggttttc	gacatagctc	ttatgttccc	cgtggagttg	ttgtacggta	2040
50	acgggtgaagt	ttacttgga	gaactcgata	cgttggtgaa	gagggaaagg	gattacctgg	2100
51	cctacaatgt	tggtcagtgt	ggtgagatgt	atgaacattc	cttctctaac	gtaagcgggt	2160
52	ttttcacctt	ttcttatgta	cgcacttcgt	ccgggaacgt	gtttaagcta	gagtatgagg	2220
53	gataccggtg	tggttaccat	catctcacta	tgtgtagggc	tcagaagtca	cctggaactg	2280
54	aggttacgta	taggtcgttg	gtcccgtcgt	tcgtgggcaa	atcgtcgttg	ttcatacctg	2340
55	ttgtagctgg	ttctagtgtg	tcctttaaga	caatagtcct	cgattcggac	tttgcgaca	2400
56	ggatctattc	ctacgcgtc	aacactatag	ggacattcga	gaatagaacg	tttgagtatg	2460
57	ccgttggggc	ggtcaggtcg	caaaaagacc	atgtcattac	agggagtcgc	gttggtccaca	2520
58	gcaaggttga	tatttctcct	gatgatatgt	ggggtttagt	tgtcgtctgt	atggctcagg	2580
59	cgattaagga	tagggcgaag	agtattcgtc	cctataactt	tataaaaagc	agtgaaggga	2640
60	gtctcgccgg	ggtcttcaag	ctcttctttc	agaccgtagg	cgattgtttt	tcgaacgcag	2700
61	tctccgtcta	tgctaaggca	atgggtgcacg	ataaacttcaa	cgttttggag	acgcttatgt	2760
62	ctatgcccg	agcgttcac	cgtaaaagtac	ctgggtctgt	tgttggtacc	atttgcactt	2820
63	ctggagcttc	agacaggttg	gagctcaggg	gtgcctttga	tatttcgaag	gagaccttcg	2880
64	gtaggaaact	gaagaatagt	cgcttgccgc	tcttctctag	ggctatcgtg	gaagattcaa	2940
65	ttaagggtcat	gaaggcaatg	aagacagaag	atggaaaacc	cctgccaaatt	actgaagatt	3000
66	ctgtatatgc	gttcataatg	gggaacgttt	ctaacgtcca	ctgtacgagg	gcaggctctc	3060
67	ttggcgggtc	gaaagcgacc	gtggtttcga	gtgtttctaa	gggtttggta	gctcgtgggg	3120
68	ctgcgacgaa	ggccttttct	ggcattacgt	cgttcttttc	cacaggttca	ctattctacg	3180
69	accgcggttt	aactgaagat	gaaaggcttg	atgctctggt	gcgcacagag	aatgctataa	3240
70	actcaccggt	gggcatactg	gagacgtcgc	gcgtagctgt	gagcaagggtc	gtagctggaa	3300
71	cgaaagaatt	ttggagtga	gtttccttaa	atgacttcac	cactttcgta	ttgcggaata	3360
72	agggtgcttat	cgggatattc	gtggcgtctt	tgggtgcggc	cccaattgca	tggaaagtata	3420
73	ggcgcggaat	tgccgctaac	gctagaagggt	acgcgggcag	tagttacgaa	actctaagct	3480
74	cgtttaagttc	acaagccgcc	ggtggtttac	gcgggtttaac	ctctagcaca	gtatccggtg	3540
75	gatcttttagt	cgtgcgaaga	gggttttcgt	cggcgggtgac	cgtcactagg	gcgaccgtag	3600
76	ctaaacgtca	agtcccctta	gcgttgctat	cgttttctac	ctcatacgc	atttccggct	3660
77	gcagtatgtt	aggcatttgg	gcacatgctc	ttccacggca	cttaatgttt	ttctttgggt	3720
78	tagggacatt	gcttggggcg	agggttagcg	cgaatacttg	gaagtttgga	ggcttctcca	3780
79	ataattgggtg	cgctgttccc	gaggttggtt	ggcgaggga	gagtgtcagc	tcattgttac	3840
80	tgctatttac	gctaggggta	tctttgatca	taaggggctt	gcttaacgac	accatacctc	3900
81	aacttgctta	cgtcccaccg	gtagagggga	ggaatgtgta	cgatgagacg	cttaggtatt	3960
82	accgggactt	tgactatgac	gaagggtgctg	gtccatctgg	gactcagcat	gaagcgggtc	4020
83	ccggtgacga	taacgatgga	tccacttcta	gtgtctcaag	ctatgatgtt	gtcacaaatg	4080
84	tgcgcgacgt	ggggattagc	accaacgggg	aagttactgg	tgaagaagag	acccattcac	4140
85	ctcgaagcgt	gcaatacact	tatgtcgagg	aagagggttc	cccgtctgca	gctgtggcgg	4200
86	aaagacaagg	tgatccgtcg	ggttctggta	ccgctgacgc	tatggctttt	gttgaaagtg	4260
87	tgaaaaaagg	tgtcgacgat	gtctttcacc	aacagtctag	tggggaaacg	gctcgtgagg	4320
88	ttgaggtgga	cggcaaagg	ttgctccag	aaagcgtcgt	cggtgaggcg	ccgacacaag	4380
89	aaaggggaag	agctgcagat	ggtaacacag	cacaaaccgc	ggtcaacgaa	ggcgacaggg	4440
90	agccagtaca	gtccagtctt	gtgagttcgc	cacaggctga	tattccaaag	gtcaccagct	4500
91	ccgaggtaca	tgctcagaaa	gaagtgaac	aagaagtacc	attggcgact	gtttcggggc	4560
92	ccacgccaat	cgtcgatgag	aaaccgcgcc	caagtgttac	gactcgtggt	gtgaagataa	4620
93	ttgacaagg	caaggccgtc	gctcatgtgg	ctgagaaaaa	acaggtacaa	gtcgagcagc	4680
94	ccaaacagag	gagtttgacg	atcaatgaag	gcaaggccgg	taaacagctt	tgcatgttta	4740

PAGE: 3

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/301,906

DATE: 05/10/1999

TIME: 14:09:13

Input Set: I301906.RAW

95	gaacgtgttc	ctgcgggtgtg	cagctgggatg	tgtacaacga	agcgactatc	gccaccaggt	4800
96	tctcaaacgc	atttaccttt	gtcgataact	tgaaagggag	gagtgcggtc	tttttctcaa	4860
97	agctgggtga	ggggatatacc	tataatgggtg	gtagccatgt	ttcatcaggg	tggcctcgtg	4920
98	ccctagagga	tatcttaacg	gcaattaaagt	acccaagcgt	cttcgaccac	tgtttagtgc	4980
99	agaagtacaa	gatgggtgga	ggcgtaaccat	tccacgctga	tgacgaggag	tgctatccat	5040
100	cagataaacc	tatcttgacg	gtcaatctcg	tggggaaaggc	aaacttctcg	actaagtgca	5100
101	ggaaggggtg	taagggtcatg	gtcataaacg	tagcttcggg	tgactatttt	cttatgcctt	5160
102	gcggttttca	aaggacgcac	ttgcattcag	taaactccat	cgacgaaggg	cgcatcagtt	5220
103	tgacgttcag	ggcaactcgg	cgcgctcttg	gtgtaggcag	gatgttgacg	ttagccggcg	5280
104	gcgtgtcggg	tgagaagtca	ccagggtgttc	caaaccagca	accacagagc	caaggtgcta	5340
105	ccagaacaat	cacaccaaaa	tccggggggca	aggctctatc	tgagggaaagt	ggtagggaag	5400
106	tcaaggggag	gtcgacatac	tcgatatggg	gcgaacaaga	ttacgttagg	aagtgtgagt	5460
107	ggctcagggc	tgataatcca	gtgatggctc	ttgaacctga	ctacacccca	atgacatttg	5520
108	aagtgggttaa	aaccgggacc	tctgaagatg	ccgtcgtgga	gtacttgaag	tatctggcta	5580
109	taggcattga	gaggacatac	agggcggttg	ttatggctag	aaatattgcc	gtcactaccg	5640
110	ccgaagggtg	tctgaaagta	cctaatacaag	tttatgaatc	actaccgggc	tttcacgttt	5700
111	acaagtcggg	cacagatctc	atcttttcatt	caacacaaga	cggcttgctg	gtgagagacc	5760
112	taccgtacgt	actcatagct	gaaaaaggta	tctttaccaa	gggcaaagat	gtcgacgcgg	5820
113	tggtagcttt	gggcgacaat	ctgttcgtat	gcgacgatat	actgggtttt	cacgatgcc	5880
114	ttaatttgat	aggtgcactg	aaagtcgctc	gatgcggcat	ggtgggcgaa	tcgtttaagt	5940
115	ccttcgaata	taagtgtctat	aatgtccccc	cagggtggcgg	taagacgacg	acgttagtgg	6000
116	acgaattcgt	taagtcaccc	aatagcacag	ccaccattac	ggctaattgt	ggaagtctct	6060
117	aggacataaa	tatggcgggtg	aagaagagag	atccgaattt	ggaaggtctc	aacagtgcct	6120
118	ccacagttaa	ctccagggtg	gtaaaacttta	tcgtcagggg	aatgtataaa	aggggttttg	6180
119	tggatgaggt	gcacatgatg	catcaaggct	tactacaact	aggcgtcttc	gcaaccggcg	6240
120	cgtcggaagg	cctctttttt	ggagacataa	atcagatacc	attcataaac	agggagaaag	6300
121	tgtttaggat	ggattgtgct	gtttttgttc	caaagaagga	aagcgttgta	tacacttcta	6360
122	aatcgtagag	gtgtccgtta	gatgtttgct	acttggtgtc	ctcaatgacc	gtaaggggaa	6420
123	cggaaaagtg	ttaccctgaa	aaggctcgta	gcggtaagga	caaaccagta	gtaagatcgc	6480
124	tgtccaaaag	gccaattgga	accactgatg	acgtagctga	aataaacgct	gacgtgtact	6540
125	tgtgcatgac	ccagttggag	aagtcggata	tgaagaggtc	gttgaaggga	aaaggaaaaa	6600
126	aaacaccagt	gatgacagtg	catgaagcac	agggaaaaac	attcagtgat	gtggatttgt	6660
127	ttaggacgaa	gaaagccgat	gactccctat	tcactaaaca	accgcatata	cttggttggt	6720
128	tgtcgagaca	cacacgctca	ctggtttatg	ccgctctgag	ctcaaagtgt	gacgataagg	6780
129	tcggcacata	tattagcgac	gcgtcacctc	aatcagtatc	cgacgctttg	cttcacacgt	6840
130	tcgccccggc	tggttgcttt	cgaggatat	gagcgtatga	atcttggtgg	gaccttcgaa	6900
131	ggggagttgg	tacggaagat	accaacaagt	cattttgtag	ccgtgaatgg	gtttctcgag	6960
132	gacttactcg	acggttggtc	ggctttcgac	tatgacttct	ttgaggatga	tttcgaaaact	7020
133	tcagatcagt	ctttcctcat	agaagatgtg	cgcatttctg	aatctttttc	tcatttttacg	7080
134	tcgaaaatag	aggatagggt	ttacagtttt	attagggtcta	gcgtagggtt	accaaagcgc	7140
135	aacaccttga	agtgtaacct	cgtcacgttt	gaaaatagga	atttcaacgc	cgatcgcggt	7200
136	tgtaacgtgg	gttgtgacga	ctctgtggcg	catgaactga	aggagatttt	cttcgaggag	7260
137	gtcggttaaca	aagctcggtt	agcagagggtg	acggaaaagc	atttgtccag	caacacgatg	7320
138	ttgttatcag	attggttgga	caaaagggca	cctaacgctt	acaagtctct	caagcgggct	7380
139	ttaggttcgt	ttgtctttca	tccgtctatg	ttgacttctt	atacgtctcat	ggtgaaagca	7440
140	gacgtaaaac	ccaagttgga	caatacgcca	ttgtcgaagt	acgtaacggg	gcagaatata	7500
141	gtctaccacg	ataggtgcgt	aactgcgctt	ttttcttgca	tttttactgc	gtgcgtagag	7560
142	cgcttaaaaat	acgtagtggg	cgaaagggtg	ctcttctacc	acgggatgga	cactgcggag	7620
143	ttggcggctg	cattgaggaa	caatttgggg	gacatccggc	aatactacac	ctatgaactg	7680
144	gatatcagta	agtacgacaa	atctcagagt	gctctcatga	agcagggtgga	ggagttgata	7740

PAGE: 4

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/301,906

DATE: 05/10/1999  
TIME: 14:09:13

Input Set: I301906.RAW

145	ctcttgacac	ttggtgttga	tagagaagtt	ttgtctactt	tctttttgtg	tgagtatgat	7800
146	agcgtcgtga	gaacgatgac	gaaggaattg	gtgttgtctg	tcggctctca	gaggcgcagt	7860
147	ggtggtgcta	acacgtgggt	gggaaatagt	ttagtcttgt	gcacctgtgt	gtccgtagta	7920
148	cttaggggat	tagattatag	ttatatgtga	gttagcgggt	atgatagcct	tatatttagt	7980
149	cggcagccgt	tggatattga	tacgtcgggt	ctgagcgata	attttggttt	tgacgtaaaag	8040
150	atttttaacc	aagctgctcc	atatttttgt	tctaagtttt	tagttcaagt	cgaggatagt	8100
151	ctcttttttg	ttcccgatcc	acttaaaact	ttcgtttaagt	ttggagcttc	caaaaacttca	8160
152	gatatcgacc	ttttacatga	gattttttcaa	tcttttcgtcg	atctttcgaa	gggtttcaat	8220
153	agagaggacg	tcatccagga	attagctaag	ctggtgacgc	ggaaaataaa	gcattcggga	8280
154	tggacctact	cggctttgtg	tgtcttgac	gttttaagt	caaatttttc	gcagttctgt	8340
155	aggttatatt	accacaatag	cgtgaatctc	gatgtgcgcc	ctattcagag	gaccgagtcg	8400
156	ctttccttgc	tggccttgaa	ggcaagaatt	ttaagggtga	aagcttctcg	ttttgccttt	8460
157	tcgataaaga	gggggttaatc	gcgttggtcca	cgctatagtg	tttctgtgcc	tcggttcttc	8520
158	gtgagggttaa	taccgaaggg	tcgtcgtact	tatctcagtt	atttattttt	tcgtcttctc	8580
159	ttaggcgtgc	catccgtgaa	gttaataacc	gtggcactcc	ttctcgaaat	gggtattaaa	8640
160	gaccaaaaatt	ttttatttgt	gtgtactttt	tgttttgttc	acaccgtgag	gacaagaccg	8700
161	gtggaacatg	tacagtagag	ggctctttct	taagtctcgg	gttacccttc	ctactcttgt	8760
162	cggagcatat	atgtgggagt	ttgaactccc	gtatcttaac	gacaagagac	acatcagcta	8820
163	tagcgcgcca	agtgtcgcga	cttttagcct	tgtgtcgagg	taggataggg	gccaacaggt	8880
164	gaccaacagc	ctgcacttaa	gggtgcgtgg	aagtgttga	tttggctca	gtgtgccaaa	8940
165	tatcttttta	ggcgatgtac	aggagtctag	tttagtgtgt	ctttggggga	tgacggggagc	9000
166	gactagggtt	aggactgtag	ctgctatgta	agtcgtgcat	gcggcattgt	gcgtaagacg	9060
167	tgcatgcatt	tgggcgagtg	ccctaggggca	gcgtcgggtc	ggtgactagc	agccggctct	9120
168	acggagcgct	gaaagtgtca	ggctctgaag	gtacagttgg	gctgaggcag	gacatgggtg	9180
169	aacgagttga	ccgtggggac	cagcggcggt	gactcggggc	gtagccacgc	gcggggcggc	9240
170	agggcgctct	gtggtgtatc	tgggcaagat	acggcctttat	taggcaccat	aatatggagc	9300
171	ccaaagcgtc	gggggtcgga	aacatctcca	tagcttagtg	gcagcagcct	aagataggct	9360
172	gggaggcccg	ttccctgtag	tagtgggtgg	ttagcatgcc	actaagcggt	gcggcggtgat	9420
173	aaggcgccac	cgtccgtagt	taggcgaccc	gtgttttaac	agggctctct	tagttaagtt	9480
174	taggcatgtc	gtacagttag	gatttctttt	tagatattct	tttatttttt	attgtttgtt	9540
175	agtttagatg	tacattatta	cgtaggttac	tttggcgcta	cgccagaggt	ttttctctct	9600
176	tgtgtgtagc	ctttaatgta	ggtttctttg	ttttattttt	gcctttcagg	cggcgcgttt	9660
177	cttttcttct	atttagggtt	atcttctttc	cttagtgttg	tcgtatatga	cgctacgtcc	9720
178	aaattatgaa	ttttccttcg	tgtaggcgct	gttgagtgcg	ttcatcggcg	ctagacgagg	9780
179	tttagtggcg	acataaatag	gtttttgcgc	gagattggga	tagaacgagt	tcgccttaaa	9840
180	agagaaatcg	gggaaggcgc	cacgcgaatg	accttcgtgc	tgagcgaagg	tagtatcggt	9900
181	attttataatt	gaagtaggcg	tatttggtta	tggatgattt	taaacaggca	atactgttgc	9960
182	tagtagtcga	ttttgtcttc	gtgataattc	tgctgctggg	tcttacgttc	gtcgtcccca	10020
183	ggttacagca	aagctccacc	attaatacag	gtcttaggac	agtgtgattc	ctcctttagt	10080
184	tagatatgga	agtaggtata	gattttggaa	ccactttcag	cacaatctgc	ttttcccat	10140
185	ctggggtcag	cggttgtact	cctgtggccg	gtagtgttta	cgttgaaacc	caaattttta	10200
186	tacctgaagg	tagcagtact	tacttaattg	gtaaagctgc	ggggaaagct	tatcgtgacg	10260
187	gtgtagaggg	aaggttgtat	gttaacccga	aaagggtggc	aggtgtgacg	agggataacg	10320
188	tcgaacgcta	cgtcgagaaa	ttaaaacct	catacacctg	gaagatagac	agcggaggcg	10380
189	ccttattaat	tggagggtta	ggttccggac	cagacacctt	attgagggtc	gttgacgtaa	10440
190	tatgtttatt	cttgagagcc	ttgatactgg	agtgcgaaag	gtatacgtct	acgacgggtta	10500
191	cagcagctgt	tgtaacggta	cgggtgact	ataactcctt	ttaacgaagc	ttcgttgttg	10560
192	agggcgtaaa	aggtcttggt	ataccgggtta	gagggtgttg	taacgaaccg	acggccgcag	10620
193	ccctctatct	cttagctaag	tcgcgagtag	aagacctatt	attagcgggt	tttgattttg	10680
194	ggggaggggac	tttcgacgtc	tcattcgtta	agaagaaggg	aaatatacta	tcggtcatct	10740

PAGE: 5

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/301,906

DATE: 05/10/1999  
TIME: 14:09:13

Input Set: I301906.RAW

195	tttcagtgagg	tgataaatttc	ttgggtgggta	gagatattga	tagagctatc	gtggaagtta	10800
196	tcaaaacaaaa	gatcaaagga	aaggcgtctg	atgccaaagt	agggatattc	gtatcctcga	10860
197	tgaagggaaga	cttgtctaac	aataacgcta	taacgcaaca	ccttatcccc	gtagaagggg	10920
198	gtgtggaggt	tgtggatttg	actagcgacg	aactggacgc	aatcgttgca	ccattcagcg	10980
199	ctagggctgt	ggaagtattc	aaaactggtc	ttgacaactt	ttaccagac	ccggttattg	11040
200	ccgttatgac	tgggggggtca	agtgtcttag	ttaaggtcag	gagtgatgtg	gctaatttgc	11100
201	cgcagatata	taaagtcgtg	ttcgacagta	ccgattttag	atgttcgggtg	gcttgtgggg	11160
202	ctaaggttta	ctgcgatact	ttggcaggta	atagcggact	gagactgggtg	gacactttta	11220
203	cgaatacgtc	aacggacgag	gtagtgggtc	ttcagccggt	ggtaattttc	ccgaaaggta	11280
204	gtccaatacc	ctgttcata	actcatagat	acacagtggtg	tgggtggagat	gtggtatacg	11340
205	gtatatattga	agggggagaat	aacagagcct	ttctaaatga	gccgacgttc	cggggcgtat	11400
206	cgaacgtag	gggagaccca	gtagagaccg	acgtggcgca	gtttaatctc	tccacggacg	11460
207	gaacgggtgc	tgttatcggt	aatgggtgag	aagtaaagaa	tgaatatctg	gtacccggga	11520
208	caacaaacgt	actggattca	ttggtctata	aatctgggag	agaagattta	gaggctaagg	11580
209	caataccaga	gtacttgacc	acactgaata	ttttgcacga	taaggctttc	acgaggagaa	11640
210	acctgggtaa	caaagataag	gggttctcgg	atttaaggat	agaagaaaaat	tttttaaaat	11700
211	ccgccgtaga	tacagacacg	attttgaatg	gataaatata	tttatgtaac	ggggatatta	11760
212	aaccctaacg	aggctagaga	cgaggtattc	tcggtagtga	ataagggata	tattggaccg	11820
213	ggagggcgct	ccttttcgaa	tcgtggtagt	aagtacaccg	tcgtctggga	aaactctgct	11880
214	gcgaggatta	gtggatttac	gtcgacttcg	caatctacga	tagatgcttt	cgcgtatttc	11940
215	ttgttgaaaag	gcggattgac	taccacgctc	tctaacccaa	taaaactgtga	gaattgggtc	12000
216	aggtcatcta	aggattttaag	cgcgtttttc	aggaccctaa	ttaaaggtaa	gattttatgca	12060
217	tcgcgttctg	tggacagcaa	tcttccaaag	aaagacaggg	atgacatcat	ggaagcgagt	12120
218	cgacgactat	cgccatcgga	cgccgccttt	tcgagagcag	tgtcggttca	ggtagggaaag	12180
219	tatgtggacg	taacgcagaa	tttagaaagt	acgatcgtgc	cgtaaagagt	tatggaaata	12240
220	aagaaaaagac	gaggatcagc	acatgttagt	ttaccgaagg	tggatatccgc	ttacgtagat	12300
221	ttttatacga	acttgcagga	attgctgtcg	gatgaagtaa	ctagggccag	aaccgatata	12360
222	gtttcggcat	acgctaccga	ctctatggct	ttcttagtta	agatgttacc	cctgactgct	12420
223	cgtgagcagt	ggttaaaaaga	cgtgctagga	tatctgctgg	tacggagacg	accagcaaat	12480
224	ttttcctacg	acgtaagagt	agcttgggta	tatgacgtga	tcgctacgct	caagctggtc	12540
225	ataagattgt	ttttcaacaa	ggacacaccc	gggggtatta	aagacttaaa	accgtgtgtg	12600
226	cctatagagt	cattcgaccc	ctttcacgag	ctttcgtcct	atttctctag	gttaagttac	12660
227	gagatgacga	caggtaaagg	gggaaagata	tgcccgagga	tcgccgagaa	gttgggtgcgc	12720
228	cgtctaattg	aggaaaaacta	taagttaaga	ttgaccccgag	tgatggcctt	aataattata	12780
229	ctgggtatact	actccattta	cggcacaaac	gctaccagga	ttaaaagacg	cccggatttc	12840
230	ctcaatgtga	ggataaaagg	aagagtcgag	aaggtttcgt	tacgggggggt	agaagatcgt	12900
231	gccttttagaa	tatcagaaaa	gcgcgggata	aacgctcaac	gtgtattatg	taggtactat	12960
232	agcgatctca	catgtctggc	taggcgacat	tacggcattc	gcaggaacaa	ttggaagacg	13020
233	ctgagttatg	tagacgggac	gttagcgtat	gacacggctg	attgtataac	ttctaagggtg	13080
234	agaaatacga	tcaacaccgc	agatcacgct	agcattatac	actatatcaa	gacgaacgaa	13140
235	aaccaggtta	ccggaactac	tctaccacac	cagcttttaa	gctgcgtgta	gtatgcgacg	13200
236	atgtttctcg	tattagtttt	ataaaaaatt	ttaattgctc	tgtgtgtggg	ttttgttgag	13260
237	tgaacgcgat	ggcatttgaa	ctgaaattag	ggcagatata	tgaagtcgtc	cccgaaaata	13320
238	atgtgagagt	tagagtgggg	gatgcggcac	aaggaaaatt	tagtaaggcg	agtttcttaa	13380
239	agtacgttaa	ggacgggaca	caggcggaat	taacgggaat	cgccgtagtg	cccgaaaaat	13440
240	acgtattcgc	cacagcagct	ttggctacag	cggcgagga	gccacctagg	cagccaccag	13500
241	cgcaagtggc	ggaaccacag	gaaaccgata	taggggtagt	gccggaatct	gagactctca	13560
242	caccaaataa	gttgggttttc	gagaaagatc	cagacaagtt	cttgaagact	atgggcaagg	13620
243	gaatagcttt	ggacttggcg	ggagttaccc	acaaaccgaa	agttattaac	gagccaggga	13680
244	aagtatcagt	agaggtggca	atgaagatta	atgccgcatt	gatggagctg	tgtagaagg	13740

PAGE: 6

VERIFICATION SUMMARY  
PATENT APPLICATION US/09/301,906

DATE: 05/10/1999  
TIME: 14:09:13

Input Set: I301906.RAW

Line ? Error/Warning

Original Text

-----